



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/066,076	01/31/2002	Masato Kobayashi	FUJH 19.387	2478
26304	7590	05/10/2005	EXAMINER	
KATTEN MUCHIN ROSENMAN LLP			CHANG, EDITH M	
575 MADISON AVENUE			ART UNIT	
NEW YORK, NY 10022-2585			PAPER NUMBER	
			2637	

DATE MAILED: 05/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/066,076	KOBAYASHI ET AL.	
	Examiner	Art Unit	
	Edith M. Chang	2637	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7 and 9 is/are rejected.
- 7) ☒ Claim(s) 6, 8, 10-11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 January 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>20020131</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. Figures 7-10 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claims 2-6 and 8-11 are objected to because of the following informalities:

Claim 2, line 3: "read clock signals" should be "read clock signal".

Claim 3, line 2: "maintains" should be "makes a cycle of said read clock signal equal to";
lines 5 & 7: "a cycle of said" should be "said cycle of".

Claim 4, line 9: "setting timings" should be "a plurality of timings".

Claim 6, line 5: "its own output signal" should be "an output signal of said phase-locked circuit"; line 7: "an output signal" should be "the output signal".

Claims 8-11, line 7: "communication data that" should be "communication data having the same bytes of said stuff data"; line 11: "all those data" should be "all data".

Claim 5 is dependent on the objected claim 4.

Art Unit: 2637

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 7 and 9 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 7, lines 8-12 recites that the phase-locked loop circuit has as input signals a signal resulting from division by a variable frequency divider of an *input* clock signal. However in FIG.1 or FIG.6B, the phase-locked loop circuit has as input signals a signal resulting from division by a variable frequency divider of an *output* clock signal. The claim 7 is not described in the specification.

Claim 9 is dependent on the rejected claim 7.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over admitted prior art (Admission) in view of Murakami (US 6,658,074 B1).

Regarding **claim 1**, In Fig.7 of the current application, the admitted prior art teaches all subject matter: a memory unit (102); a write unit (106); a write controller (104); a read clock signal generator (120); and a read unit (113) as recited in the claim, except a read clock signal regulator. However, Murakami teaches a technique for reproducing clock signal at a receiver in a pulse stuffed synchronization system (column 1 lines 8-10 & 24-33). In FIG.4, Murakami teaches an embodiment of the technique with stuff rate measuring circuits 3 & 13, a control circuit 14 providing a divide ratio to the variable frequency dividing circuit 5 which in turn provides a control signal 57 (654 Fig.13) to the phase locked loop circuit 6 (detail shown in Fig.13) (as the read clock generator, column 6 lines 19-27) to adjust the read clock signal 58 (255 Fig.11, detail diagram of a storage circuit 2 with an address control circuit 204 shows a prescribed order direction) of the storage circuit 2, wherein the STS-1 is the high order group signal and the DS3 is the lower order group signal.

At the time of the invention was made, it would have been obvious to a one of ordinary skill in the art to have the stuff rate measuring circuits, control circuit and variable frequency dividing circuit taught by Murakami coupled to the destuffing control circuit 104 and the phase locked-loop circuit 120 of the admitted prior art (Fig.7) to provide a clock signal reproducing circuit for the benefits of having an efficient circuit with small circuit size and frequency division ratio to reproduce a lower order group signal from a higher order group signal (column 5 line 60-column 6 line 7).

Regarding **claim 2**, Murakami teaches a plurality of stuffing enable periods q (column 14 lines 11-21) to adjust clock timings.

Regarding **claim 3**, in Fig.4, Murakami teaches the control circuit 14, the variable frequency dividing circuit 5, and the phase locked loop circuit 6 adjust the cycle of the read clock signal 58, wherein the PLL circuit 6 locks the cycle if the cycle is the DS3 (a predetermined interval), lengthen the cycle if it is shorter than the DS3, or shorten if it is longer than the DS3. It is the PLL feature/function to adjust/lock the clock and is well known in the art.

Regarding **claims 4 & 5**, in Fig.4, Murakami teaches the read clock signal 58 adjusted based on two stuff rates, the first is generated by the stuff rate measuring circuit 3 to detect the positive/zero/negative stuffing in the STS-1 signal (column 16 lines 23-26), and the second is generated by the stuff rate measuring circuit 13 to detect the positive stuffing in the overhead of STS-1 SPE and the unwanted bits in the overhead of STS-1 SPE signal are deleted (column 16 lines 33-40) wherein the unwanted bits in the overhead of STS-1 SPE apart substantially equal time intervals (as defined in Fig.17 & 18).

Allowable Subject Matter

7. Claims 6, 8, and 10-11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record fails to teach or suggest, alone or in a combination, among other things, at least a receiver apparatus for receiving digital data in which stuff data have been

Art Unit: 2637

inserted by stuffing synchronization as a whole, the combination of elements and features, which includes a read clock signal regulator increments or decrements a division ratio of a variable frequency divider by 1 to adjust the cycle of the read clock signal, wherein the division ration has the same numerical values as the number of bits held in each memory cells; or a frequency divider with a division ration of N for dividing an input clock signal, another frequency divider with a division ration of M for dividing an output signal of the VCO, wherein N:M equals to a ration between data volume of the overhead part and the payload part of a frame, and the read clock signal regulator increments or decrements the division ration of the another frequency divider by 1 to adjust the cycle of the read clock signal as cited in the claims.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edith M. Chang whose telephone number is 571-272-3041. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jayanti Patel can be reached on 571-272-2988. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

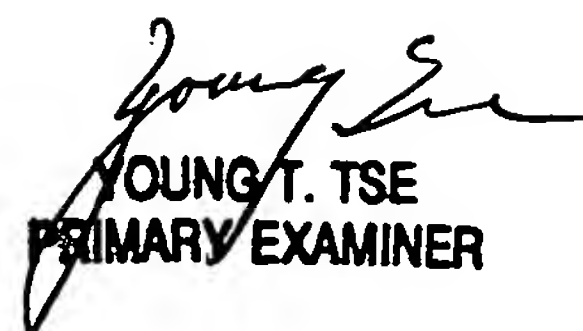
Application/Control Number: 10/066,076

Page 7

Art Unit: 2637

Edith Chang

May 6, 2005


YOUNG T. TSE
PRIMARY EXAMINER